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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,007	07/08/2003	Masashi Sato	P23800	9529

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RESTON, VA 20191

EXAMINER

NUTTER, NATHAN M

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,007

Applicant(s)

SATO ET AL

Examiner

Nathan M. Nutter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

The restriction requirement of 29 December 2004 is modified as follows:

The requirement between Groups I, II and III is withdrawn in view of the art found and applied. The requirement of the election of species, however, is being maintained. Applicant's election with traverse of "(B2) thermoplastic styrene elastomer denatured by acid (*sic*) component" for the species of second polymer in the reply filed on 28 January 2005 is acknowledged. The traversal is on the ground(s) that "it would be no serious burden on the Examiner to examine all of the pending claims, because a search for all of the claims... should be made ***in order to do a complete and thorough search.***" This is not found persuasive because a search will be made, complete and thorough, and drawn to the elected species. Counsel apparently believes that each of the species involves each of the other species in structure and effect. Counsel has failed to sufficiently show these species to be distinct. The requirement clearly states that "(s)hould applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case." Counsel has not done so. Each of the species would require a different search because of the inclusion of different polymers (B1) to (B6).

(B1) 525/191, 240, 241

(B2) 525/191, 192, 193, 194, 240, 241

(B3) 525/191, 192, 193, 194, 240, 241

(B4) 525/191, 192, 193, 194, 232

(B5) 525/191, 192, 193, 194

(B6) 525/191, 192, 193, 194, 232

While overlapping in some instances, they differ sufficiently to pose an undue burden upon the Examiner to search all because of the many considerations, including scope of inclusion of each constituent.

As such, only claims 1, 13 and 14 are generic, with claims 5 and 9-12 being drawn to the elected species "(B2) thermoplastic styrene elastomer denatured by acid (*sic*) component."

Only claims 1, 5 and 9-14 will be examined.

The requirement is still deemed proper and is therefore made FINAL.

Specification

The disclosure is objected to because of the following informalities:

A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

The Specification is not written in clear, idiomatic English. For example, page 1, first paragraph is a run-on sentence, Para. [0003] "taking the recent measures for global environment," etc., page 2, Para. [0005] "there is resulted a problem," "tensile strength extremely lowers," "there is an idea," etc.. Correction of these examples will NOT be deemed to satisfy this requirement. The Specification is replete with errors.

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A preliminary examination of this application reveals that it includes terminology which is so different from that which is generally accepted in the art to which this invention pertains that a proper search of the prior art cannot be made. For example: "nitrogen-containing compound."

Applicant is required to provide a clarification of these matters or correlation with art-accepted terminology so that a proper comparison with the prior art can be made. Applicant *should be careful not to introduce any new matter into the disclosure* (i.e., matter which is not supported by the disclosure as originally filed).

The disclosure is objected to under 37 CFR 1.71, as being so incomprehensible as to preclude a reasonable search of the prior art by the examiner. For example, the following items are not understood: the term "melt flow rate" is disclosed by bare numbers only. It cannot be determined, nor is there disclosure thereto, what units of measurement, e.g., "g/10 min.", "g/min.", "dg/10 min.", "dg/min.", etc. are being used.

Applicant is required to submit an amendment which clarifies the disclosure so that the examiner may make a proper comparison of the invention with the prior art.

Applicant *should be careful not to introduce any new matter into the disclosure* (i.e., matter which is not supported by the disclosure as originally filed).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 5 and 9-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. The recitation of "nitrogen-containing compound" is so broad as to be meaningless in context with the invention. It cannot be ascertained, without the undue burden of experimentation, what is being claimed thereby. The Specification at Para. [0046] states a utility for the inclusion of the "nitrogen-containing compound" as "for improving the flame retarding property." The claims are not so limited. Further, only "melamine or guanamine and a derivative (*sic*) thereof, cyanuric acid and isocyanuric acid or a derivative (*sic*) thereof or both (*sic*) compounds" are disclosed at Para. [0047].

Claims 1, 5 and 9-14 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Identities of the "nitrogen-containing compound(s)" that may be employed, which are critical or essential to the practice of the invention, but not included in the claims are not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 5 and 9-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite the inclusion of "a nitrogen containing compound" which is not disclosed with any degree of specificity in the Specification as to delineate the proper metes and bounds of what is being claimed. The claims require any compound containing nitrogen, including polyacrylonitrile, nylon, and other nitrogen containing polymers, ammonia, amino acids, urea, nitric acid, metal nitrates, nitrogen gas, etc. any which addition thereof would change the physical and industrial characteristics of the composition. The claims are not clear as to their proper metes and bounds. As such, they are deemed to be vague and confusing.

Further, the claims recite "melt flow rate" values without any units of measure, such as "g/10 min.", "g/min.", "dg/10 min.", "dg/min.", etc.. As such, the proper metes and bounds of the claims cannot be ascertained, and the claims are deemed to be vague and confusing.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 5 and 9-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-45 of U.S. Patent No. 6,756,440, newly cited, in view of Kobayashi et al or Murphy, both cited by applicants.

The reference to Hase et al, U.S. Patent No. 6,756,440, claims a resin blend that may comprise polypropylene, having "a melt flow rate of from 0.1 to about 5 g/10 minutes (patent claim 16)", a "styrene-based elastomeric resin modified with (i) an unsaturated carboxylic acid or (ii) an anhydride or ester" thereof and a "fire resistant metal hydroxide" included in ranges which embrace and overlap with those recited and claimed herein. The reference fails to teach the inclusion of a "nitrogen containing compound."

The reference to Kobayashi et al teaches the manufacture of a resin compound that may comprise olefin polymers, including polypropylene resin that may have a melt flow rate of "0.1 to 10 g/10 min.", a metal hydrate, including silane coupling agent pre-treated metal hydrate mixed therewith, and a melamine cyanurate compound, as recited in instant claims 11 and 12, included for "the effect of improving fire-retardancy" of the resin blend. Note column 4 (line 62) to column 5 (line 33) for the blend and metal hydrates employed. Note column 14 (lines 41-49) for the polypropylene melt flow rate. Note column 20 (lines 5-47) for the melamine cyanurate compound. The resin blend is

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taught to be useful in the manufacture of "wiring materials used in inner and outer wiring of electric/electronic equipment" at column 22 (line 61) to column 23 (line 17).

The reference to Murphy shows the art-recognized use of melamine cyanurate and metal hydroxides, including those surface-treated with silane, for use in thermoplastics, as herein claimed, for their fire-retardancy properties in thermoplastic resins. Note page 44, first column to the third column under the headings, "Melamine" and "Metal hydroxides."

The secondary references teach the art-recognized uses of melamine cyanurate in thermoplastic resin compositions for their flame-retardancy characteristics. Both references teach the inclusion of metal hydroxides, including silane treated metal hydroxides, for their flame-retardancy characteristics. Subsequent employment of the nitrogen-containing melamine cyanurates of either Kobayashi et al or Murphy in the composition as claimed by Hase et al would have been prima facie obvious to an artisan possessing an ordinary skill since the supportive references teach the use thereof in thermoplastic resins and the essential equivalent of nitrogen-containing melamine cyanurates to metal hydroxides, including silane treated metal hydroxides, for flame-retardancy.

Claims 1, 5 and 9-14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,646,205, newly cited. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claims recite a

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resin blend of two polymers (claims 1 and 8), including a resin comprising a functional group that may be selected from "carboxylic acid groups, (and) carboxylic acid anhydride groups (patented claims 5 and 12)" and further comprising a metal hydroxide compound, including nitrogen containing metal nitrides, as recited in patented claims 7 and 14, each of which would broadly embrace the compounds herein claimed as (A), (B2), (C) and (D).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5 and 9-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Hase et al, U.S. Patent No. 6,646,205.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

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The reference teaches the manufacture of a blend that may comprise a propylene polymer that may have a MFR of 0.5 g/10 min with a thermoplastic styrene polymer elastomer "denatured by acid component," as herein claimed. Note column 3 (lines 16-38) for the first polymer (designated as the second by the reference) and Table 1 at column 7 for the MFR. Note column 4 (lines 25-38) for the second polymer elastomer (designated as the first by the reference) and column 3 (lines 41-67) and column 5 (lines 18-44). The percentages of inclusion, which directly overlap with those recited herein, are taught at column 5 (lines 47-58). The inclusion of the metal hydroxides, including those in combination with a surface treated with silanes or fatty acids, is shown at column 2 (line 49) to column 3 (line 7). Note the many Examples. At column 2 (lines 49-54) the reference teaches the inclusion of nitrides. Further, note claims 7 and 14 of the reference. Note column 6 (lines 10-21) for the production of a coated wire, as herein claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hase et al, U.S. Patent No. 6,756,440, in view of Kobayashi et al or Murphy.

The reference to Hase et al, U.S. Patent No. 6,756,440, claims a resin blend that may comprise polypropylene, having "a melt flow rate of from 0.1 to about 5 g/10

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minutes (patent claim 16)", a "styrene-based elastomeric resin modified with (i) an unsaturated carboxylic acid or (ii) an anhydride or ester" thereof and a "fire resistant metal hydroxide" included in ranges which embrace and overlap with those recited and claimed herein. The reference fails to teach the inclusion of a "nitrogen containing compound."

The reference to Kobayashi et al teaches the manufacture of a resin compound that may comprise olefin polymers, including polypropylene resin that may have a melt flow rate of "0.1 to 10 g/10 min.", a metal hydrate, including silane coupling agent pre-treated metal hydrate mixed therewith, and a melamine cyanurate compound, as recited in instant claims 11 and 12, included for "the effect of improving fire-retardancy" of the resin blend. Note column 4 (line 62) to column 5 (line 33) for the blend and metal hydrates employed. Note column 14 (lines 41-49) for the polypropylene melt flow rate. Note column 20 (lines 5-47) for the melamine cyanurate compound. The resin blend is taught to be useful in the manufacture of "wiring materials used in inner and outer wiring of electric/electronic equipment" at column 22 (line 61) to column 23 (line 17).

The reference to Murphy shows the art-recognized use of melamine cyanurate and metal hydroxides, including those surface-treated with silane, for use in thermoplastics, as herein claimed, for their fire-retardancy properties in thermoplastic resins. Note page 44, first column to the third column under the headings, "Melamine" and "Metal hydroxides."

The secondary references teach the art-recognized uses of melamine cyanurate in thermoplastic resin compositions for their flame-retardancy characteristics. Both

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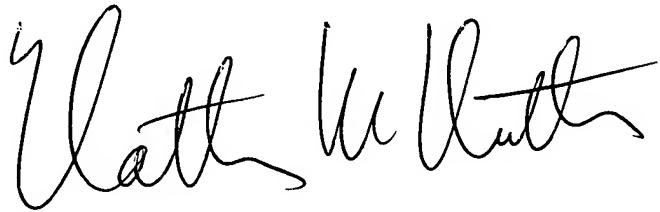
references teach the inclusion of metal hydroxides, including silane treated metal hydroxides, for their flame-retardancy characteristics. Subsequent employment of the nitrogen-containing melamine cyanurates of either Kobayashi et al or Murphy in the composition as claimed by Hase et al would have been prima facie obvious to an artisan possessing an ordinary skill since the supportive references teach the use thereof in thermoplastic resins and the essential equivalent of nitrogen-containing melamine cyanurates to metal hydroxides, including silane treated metal hydroxides, for flame-retardancy.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan M. Nutter whose telephone number is 571-272-1076. The examiner can normally be reached on 9:30 a.m.-6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Nathan M. Nutter', with a stylized, cursive script.

Nathan M. Nutter
Primary Examiner
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nmn

4 March 2005